

2-4 Practice

Form K

Solve each equation. Check your answer.

1. $4y + 15 = 6y - 11$

2. $5p + 6 = -4p - 8$

3. $13k + 5 = k - 7$

4. $6q - 1 = -q + 20$

5. $25h + 40 = -15h - 80$

6. $-2m + 13 = 2m - 3$

Write and solve an equation for each situation. Check your solution.

7. Suzanne is going to rent a car while she is out of town. One car rental company offers a flat rate of \$35 per day plus \$0.10 per mile. Another car rental company offers the same car for \$25 per day plus \$0.25 per mile. She will need the car for 5 days. How many miles would she need to drive for the first rental company to be the better deal?

8. Jeremy is looking at two different lawncare companies to weed and mulch his flower beds. Greenscape Lawncare offers to charge \$100 for the mulch plus \$12 per hr for the labor. D & J Landscape offers to charge \$23 per hr for the job including the mulch. What is the minimum number of hours the job could be for D & J Landscape to have the better deal?

Solve each equation. Check your answer.

9. $4(h + 2) = 3(h - 2)$

10. $-(3b - 15) = 6(2b + 5)$

11. $5x + 7 + 3x = -8 + 3x$

12. $18 - 6a = 4a - 4(a + 3)$

2-4 Practice (continued)

Form K

Solve each equation. If the equation is an identity, write *identity*. If it has no solution, write *no solution*.

13. $0.2f + 0.6(f + 20) = -8 + 0.4f$

14. $-8t - 3t + 2 = -5t - 6t$

15. $-(8m + 4) = 4m - 2(6m + 2)$

16. $\frac{3}{4} + \frac{1}{4}m = \frac{3}{4}m - \frac{1}{4}$

17. $5.5 - 3b = 2b - 6.25$

18. $-5(5.25 + 3.1x) = -6.2(2.5x + 1.9)$

19. Six times the sum of a number and 3 is 12 less than 12 times the number. Write and solve an equation to find the number.

20. A triangle with equal sides and a square have the same perimeters. The length of a side of the triangle is $2x + 2$. The length of a side of the square is $x + 8$. Write and solve an equation to find x .
(**HINT: Draw the two figures and label the sides to help you find the perimeter**)

21. **Open-Ended** Give one example of an equation with variables on both sides that is an identity and one equation with variables on both sides that has no solution. Justify your examples by solving the equations.